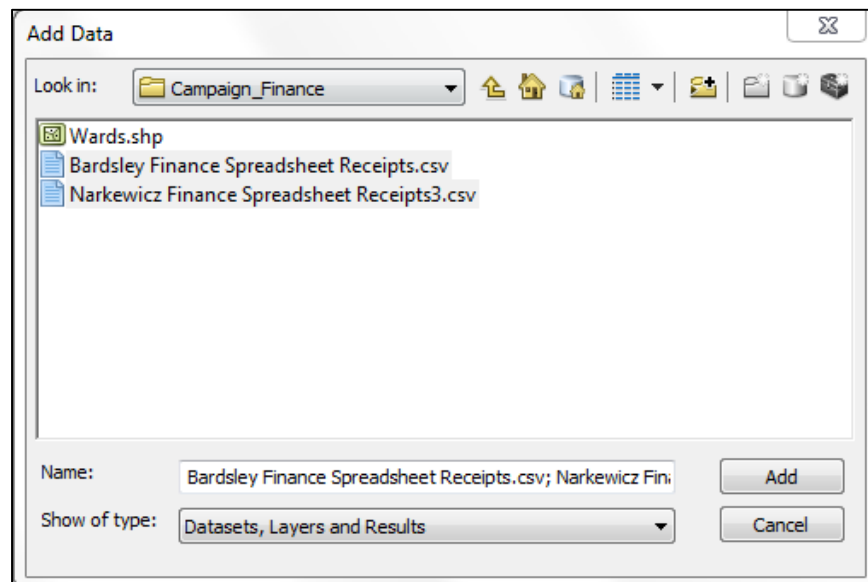# Geocoding Address Data Workshop
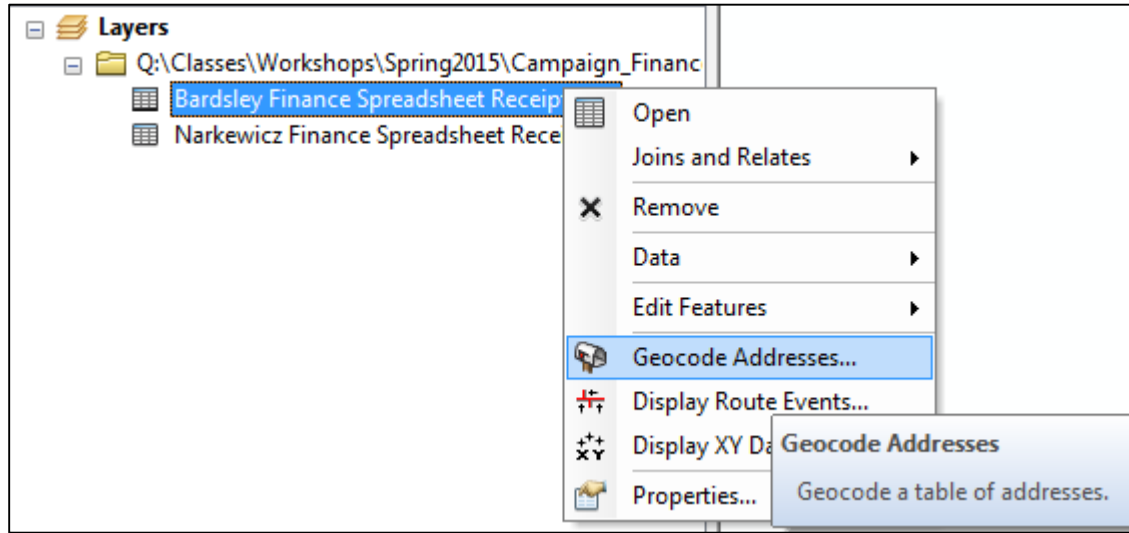## Spring 2015 – Spatial Analysis Lab

1. Locate the two spreadsheets we'll be working with:
   Q:\Classes\Workshops\Spring2015\Campaign_Finance\
   a. Bardsley campaign finance
   b. Narkewicz campaign finance

2. Take a moment to look at the different fields in the spreadsheets – the way the address data is divided, the total amounts, the donors
   a. Expand the field names to see all of the content

	A	B	C	D	E	F	G	H	I	J
1	Name	Street	City	State	Zip	Amount	Occupatio	Date	Employer	
2	Ackerman, Ronald	32 Winthrop Street	Northampton	MA	1060	$50.00		9/8/2011		
3	Adams, Jesse	187 Main Street	Northampton	MA	1060	$100.00	Attorney	6/30/2011	Self Employed	
4	Adams, Jesse	187 Main Street	Northampton	MA	1060	$25.00	Attorney	9/8/2011	Self Employed	
5	Adams, Jesse	187 Main Street	Northampton	MA	1060	$25.00	Attorney	9/8/2011	Self Employed	
6	Agna, Gwen	50 Finn Street	Northampton	MA	1060	$50.00	Principal	6/30/2011	Northampton Schools

3. When finished close both sheets

4. Open a blank map in ArcMap
5. Using **Catalog** or **Add Data** find the two excel spreadsheets from above, add both to the map

6. Right-click on the first spreadsheet in ArcMap, go to **Geocode Addresses**

7. Choose **World Geocode Service (ArcGIS Online)**
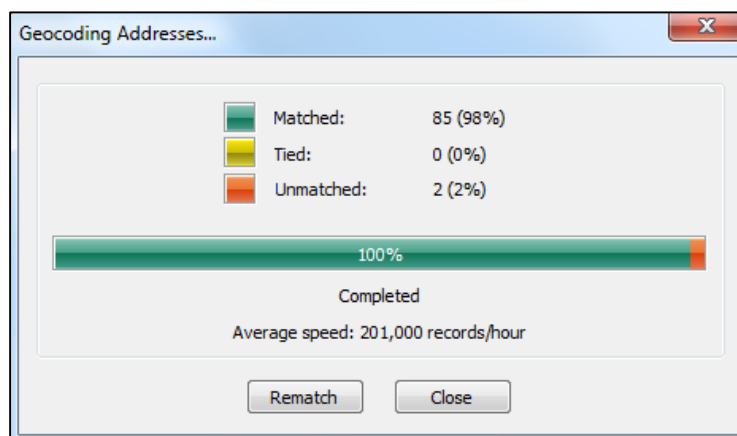
8. When prompted to sign-in use:

    Username: smithGISdata
    Password: GISisGr8

    This will sign you into an ArcGIS Online account set up with Smith College, which allows you to access this specific geocoding service, which is NOT a free service… see Geocoding Guide to explore free geocoding options
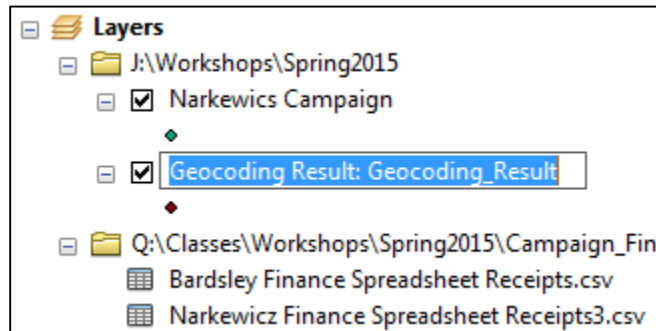
9. In the new window:
    a. Make sure the correct table is selected for geocoding
    b. Insert the appropriate fields from the spreadsheet into the **Address Input Fields**
    c. Click **Ok** to run the geocoder
    d. Ideally 100% of the addresses will match, but sometimes some don't, if this is the case click **Rematch** to investigate why the addresses may have not been matched

e. If you can successfully rematch any unmatched addresses, congratulations, if the data is not sufficient for rematching, then close the window

10. Do this for both spreadsheets in the map

11. Once both sets of data have been visualized on the map, go ahead and **rename** the layers to clarify which data represents which mayoral candidate
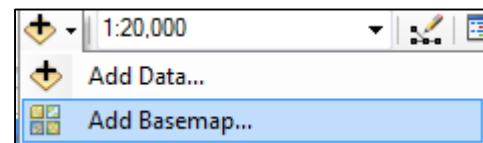

12. The data is shown at a regional level, add the **Wards.shp** layer from the workshop folder in the catalog to zoom the extent to Northampton and add the outline of the wards to the map

13. Use the symbology skills learned in previous workshops to change the symbols for each layer to display the data using the amount of each campaign contribution – if you haven't taken any other workshops, or learned these skills yet, just ask Victoria (or your neighbor!) to assist you

a. To do so you may need to first look at the attribute table to identify the field you want to symbolize your data based on
b. Consider using **graduated symbols** to display the data.

14. Add a basemap to further contextualize the data

15. If you find that the wards layer is covering the basemap, consider changing the symbology of the wards to have no fill color and only outline color

16. If you want you can switch to the layout view and polish this map into one that contains the necessary map elements (title, legend) and can be exported